

MS Word Exhibit 300 for O&M (BY2008) (Form) / KSC Shuttle Launch Control System (LCS) (Item)

Form Report, printed by: System Administrator, Jan 31, 2007

OVERVIEW

General Information

1. Date of Submission:	Jan 26, 2007
2. Agency:	026
3. Bureau:	00
4. Name of this Capital Asset:	KSC Shuttle Launch Control System (LCS)
Investment Portfolio:	BY OMB 300 Items
5. Unique ID:	026-00-01-03-01-1409-00
(For IT investments only, see section 53. For all other, use agency ID system.)	

All investments

6. What kind of investment will this be in FY2008?

(Please NOTE: Investments moving to O&M ONLY in FY2008, with Planning/Acquisition activities prior to FY2008 should not select O&M. These investments should indicate their current status.)

Operations and Maintenance

7. What was the first budget year this investment was submitted to OMB?

FY2001 or earlier

8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap.

The Launch Control System (LCS) investment maintains the unique hardware and software used at Kennedy Space Center to process and launch the Space Shuttle. The complex computer hardware and software provides control and monitor functionality as well as the capability to record and simultaneously playback near real-time telemetry. The system currently operates with 100 computer consoles using 12 million lines of custom source code. The LCS reliability is man-rated.

The LCS consists of Shuttle Data Center (SDC), Checkout Control and Monitor Subsystem (CCMS) Operations, Record and Playback Subsystem (RPS), and Other Supporting Systems (Other O&M). The Shuttle Data Center provides storage and recall of all shuttle processing and launch data. The CCMS is a custom designed computer hardware and software system for processing and launching the Space Shuttle. The system currently operates with 100 consoles, 240 peripherals, 12 million lines of Launch Processing System (LPS) source code, and 1.6 million lines of executable Ground Operations Aerospace Language (GOAL) code. The Record and Playback Subsystem (RPS) primary function is to record unprocessed Shuttle on-board instrumentation data during tests and launch countdowns.

The Space Shuttle program and the functions supported by this IT investment have existed since the mid 1970s. During this period the business management processes and the supporting financial management processes have changed to accommodate the evolving program needs and reporting requirements. While NASA can report life-cycle costs for this program and its major projects, it is extremely difficult to trace back the entire life-cycle costs history associated with this IT investment. In Fiscal Year (FY) 2003 NASA moved to a full-cost budgeting environment. For the purpose of this OMB Exhibit 300, the life cycle costs reported cover FY 2006 through the planned termination of the program which the IT investment supports. The LCS is a steady state investment in the operational phase of its life cycle.

The loss of this investment would require us to revert to manual based systems. This would increase our headcount and impact our processing schedule. Current planning shows the Space Shuttle program ending in 2010.

9. Did the Agency's Executive/Investment Committee approve this request?

Yes

9.a. If "yes," what was the date of this approval?

Apr 7, 2006

10. Did the Project Manager review this Exhibit?

Yes

12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project.

Yes

12.a. Will this investment include electronic assets (including computers)?

Yes

12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)

No

12.b.1. If "yes," is an ESPC or UESC being used to help fund this investment?

12.b.2. If "yes," will this investment meet sustainable design principles?

12.b.3. If "yes," is it designed to be 30% more energy efficient than relevant code?

13. Does this investment support one of the PMA initiatives?

Yes

If "yes," select the initiatives that apply:

Human Capital	Yes
Budget Performance Integration	Yes
Financial Performance	Yes
Expanded E-Government	Yes
Competitive Sourcing	Yes
Faith Based and Community	
Real Property Asset Management	
Eliminating Improper Payments	
Privatization of Military Housing	
R and D Investment Criteria	
Housing and Urban Development Management and Performance	
Broadening Health Insurance Coverage through State Initiatives	
Right Sized Overseas Presence	
Coordination of VA and DoD Programs and Systems	

13.a. Briefly describe how this asset directly supports the identified initiative(s)?

NASA full cost budgeting & accounting process improves financial management, while linking budget and performance using the NASA Integrated Budget & Performance Document. The Shuttle support contract & follow-on are competitively sourced. This investment supports strategic human capital management & allocation as part of the continued effort to keep the Shuttle flying safely. It advances agency efforts to leverage new IT technologies & create electronic access for program performance.

14. Does this investment support a program assessed using OMB's Program Assessment Rating Tool (PART)?

Yes

14.a. If "yes," does this investment address a weakness found during the PART review?

No
14.b. If "yes," what is the name of the PART program assessed by OMB's Program Assessment Rating Tool?
Space Shuttle
14.c. If "yes," what PART rating did it receive?
Adequate
15. Is this investment for information technology (See section 53 for definition)?
Yes

For information technology investments only:																				
16. What is the level of the IT Project (per CIO Council's PM Guidance)?																				
Level 2																				
17. What project management qualifications does the Project Manager have? (per CIO Council's PM Guidance)																				
(1) Project manager has been validated as qualified for this investment																				
18. Is this investment identified as "high risk" on the Q4 - FY 2006 agency high risk report (per OMB's "high risk" memo)?																				
No																				
19. Is this a financial management system?																				
No																				
19.a. If "yes," does this investment address a FFMIA compliance area?																				
19.a.1. If "yes," which compliance area:																				
19.a.2. If "no," what does it address?																				
The Launch Control System (LCS) investment maintains the unique hardware and software used at Kennedy Space Center to process and launch the Space Shuttle. The complex computer hardware and software provide control and monitor functionality as well as the capability to record and simultaneously playback near real-time telemetry.																				
19.b. If "yes," please identify the system name(s) and system acronym(s) as reported in the most recent financial systems inventory update required by Circular A-11 section 52.																				
20. What is the percentage breakout for the total FY2008 funding request for the following? (This should total 100%)																				
<table border="1"> <thead> <tr> <th>Area</th> <th>Percentage</th> <th></th> </tr> </thead> <tbody> <tr> <td>Hardware</td> <td>6.00</td> <td></td> </tr> <tr> <td>Software</td> <td>0.00</td> <td></td> </tr> <tr> <td>Services</td> <td>94.00</td> <td></td> </tr> <tr> <td>Other</td> <td>0.00</td> <td></td> </tr> <tr> <td>Total</td> <td>100.00</td> <td>★</td> </tr> </tbody> </table>			Area	Percentage		Hardware	6.00		Software	0.00		Services	94.00		Other	0.00		Total	100.00	★
Area	Percentage																			
Hardware	6.00																			
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Other	0.00																			
Total	100.00	★																		
21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?																				
N/A																				
22. Contact information of individual responsible for privacy related questions																				
<table border="1"> <tr> <td>Name</td> <td>Mark Mason</td> </tr> </table>			Name	Mark Mason																
Name	Mark Mason																			

Phone Number	321-867-3014
Title	KSC Information Officer
Email	mark.mason@nasa.gov

23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?

Yes

Character Limitation Checks		
Tab:		★
Exhibit 300:		★

SUMMARY OF FUNDING

SUMMARY OF SPENDING FOR PROJECT PHASES (In Millions)

1. Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated "Government FTE Cost," and should be excluded from the amounts shown for "Planning," "Full Acquisition," and "Operation/Maintenance." The total estimated annual cost of the investment is the sum of costs for "Planning," "Full Acquisition," and "Operation/Maintenance." For Federal buildings and facilities, life-cycle costs should include long term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

All amounts represent Budget Authority

(Estimates for BY+1 and beyond are for planning purposes only and do not represent budget decisions)

	PY	CY	BY
	2006	2007	2008
Planning:	0.000	0.000	0.000
Acquisition:	0.000	0.000	0.000
Subtotal Planning & Acquisition:	0.000	0.000	0.000
Operations & Maintenance:	58.760	50.629	50.754
TOTAL	58.760	50.629	50.754
Government FTE Costs	0.000	0.000	0.000
# of FTEs	0.0	0.0	0.0
Total, BR + FTE Cost	58.760	50.629	50.754

Note: For the cross-agency investments, this table should include all funding (both managing partner and partner agencies).

Government FTE Costs should not be included as part of the TOTAL represented.

2. Will this project require the agency to hire additional FTE's?

No

2.a. If "yes," how many and in what year?

3. If the summary of spending has changed from the FY2007 President's budget request, briefly explain those changes.

No changes

Budget Comments * Internal Use Only*

PERFORMANCE

Performance Information

In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative or qualitative measure.

Agencies must use Table 1 below for reporting performance goals and measures for all non-IT investments and for existing IT investments that were initiated prior to FY 2005. The table can be extended to include measures for years beyond FY 2006.

Table 1

	Fiscal Year	Strategic Goal(s) Supported	Performance Measure	Actual/baseline (from Previous Year)	Planned Performance Metric (Target)	Performance Metric Results (Actual)
1	2003	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Replace aging and obsolete equipment - User I/F, Common Data Buffer, Advisory Workstations, Console Enclosures, Front End Processors. 0 Components planned (Design Only)	Provide reliable support of Shuttle Processing - Existing LCS currently has many aging and obsolete components	Number of components replaced	100%
2	2004	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Replace 222 Advisory Workstations in FR1/2/3; Replace 6 User I/Fs and 3 FEPs in the GSPF and GTF	Provide reliable support of Shuttle Processing - Existing LCS currently has many aging and obsolete components	Number of components replaced	100%
3	2003	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain 99% or better availability	Availability of systems: Standards of Excellence (SOE) = 99% Expectation = 97% Maximum Error Rate (MER) = >97%	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensures space access	99.2%
4	2004	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain 99% or better availability	Availability of systems: Standards of Excellence (SOE) = 99% Expectation = 97% Maximum Error Rate (MER) = >97%	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensures space access	99.3%

5	2003	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain SOE of 95% on-time delivery	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	93.4%
6	2004	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain SOE of 95% on-time delivery	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	91.94%
7	2003	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	3.55 DRs per month
8	2004	Goal 8. Ensure the provision of space access, and improve it by increasing safety, reliability, and Affordability. Objective 8.3. Improve the accessibility of space to better meet research, Space Station assembly, and operations requirements.	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	5.14 DRs per month

All new IT investments initiated for FY 2005 and beyond must use Table 2 and are required to use the FEA Performance Reference Model (PRM). Please use Table 2 and the PRM to identify the performance information pertaining to this major IT investment. Map all Measurement Indicators to the corresponding "Measurement Area" and "Measurement Grouping" identified in the PRM. There should be at least one Measurement Indicator for at least four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov.

Table 2

	Fiscal Year	Measurement Area	Measurement Category	Measurement Grouping	Measurement Indicator	Baseline	Planned Improvements to the Baseline	Actual Results
1	2005	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	99.9 % Availability. This was arrived at by allowing 4 hours downtime for the Circuit Breaker, and 4 Hours for YERO Problems. (8760-8)/8760= 99.9%
2	2006	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD

3	2007	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
4	2005	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	96.2% This was calculated by estimating the total number of "Deliveries" , both H/W modifications and S/W releases, at 80. Three Deliveries were late, impacting operational use: FR-4, SAIL Installation, and PCG2 Phase 1. $(80-3)/80 = 96.2\%$
5	2006	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LPS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
6	2007	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LPS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
7	2005	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across LCS applications supports Program's reliability and ensures affordability of the systems. Goal 8: Ensure the provision of space access, and improve it by increasing safety, reliability and affordability	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LPS released applications each year from 2005 to 2010	The Year to Date IPRs per month on all Released LPS Applications is 4.9. This number was arrived at by dividing the number of IPRs seen by Set Support in FY05 by 10 months.
8	2006	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across LCS applications supports Program's reliability and ensures affordability of the systems. Goal 8: Ensure the provision of space access, and improve it by increasing safety, reliability, and affordability	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LPS released applications each year from 2005 to 2010	TBD

9	2007	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across LCS applications supports Program's reliability and ensures affordability of the systems. Goal 8: Ensure the provision of space access, and improve it by increasing safety, reliability, and affordability	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LPS released applications each year from 2005 to 2010	TBD
10	2005	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2005. Mission success criteria are those provided to the prime contractor for purposes of determining successful accomplishment of the performance fees in the contract	100%	100%	100% LCS Did not impact On-Orbit Mission Success in FY05. Did not understand how to map it to the GPRA/FY05 Budget Request.
11	2006	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2006. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD
12	2007	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2007. Mission success criteria are those provided to the prime contractor for contract performance fees determination	100%	100%	TBD
13	2008	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2008. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD
14	2009	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2009. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD

15	2010	Mission and Business Results	Transportation	Space Operations	Achieve 100% on-orbit mission success for all Shuttle missions launched in FY 2010. Mission success criteria are those provided to the prime contractor for contract performance fee determination	100%	100%	TBD
16	2008	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports NASA's goals of maintaining high LCS system reliability and ensuring space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
17	2009	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
18	2010	Technology	Reliability and Availability	Availability	Monthly percentage of unplanned or unscheduled outage supports the agency's goal of maintaining high LCS system reliability and helps ensure space access	Availability of systems: Standards of Excellence (SOE) = 99% Maximum Error Rate (MER) = >97%	Maintain 99% or better availability each year from 2005 to 2010	TBD
19	2008	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
20	2009	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD
21	2010	Customer Results	Timeliness and Responsiveness	Delivery Time	Annual percentage On-Time Delivery of LCS IT products support both the Programs overall reliability and ensure affordability of the systems	On-time Delivery of LCS IT Products - Standards of Excellence (SOE) = 95% Expectation = 80% Maximum Error Rate (MER) = >80%	Re-establish SOE of 95% on-time delivery Re-establish SOE of 95% on-time delivery each year from 2005 to 2010	TBD

22	2008	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications each year from 2005 to 2010	TBD
23	2009	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications each year from 2005 to 2010	TBD
24	2010	Processes and Activities	Quality	Complaints	Monthly average of 4 or less DRs across released LCS applications supports both the Programs overall reliability and ensures affordability of the systems	Monthly average of 4 or less DRs across released LCS applications Standards of Excellence (SOE) = 4 or less Discrepancy Reports (DRs) Expectation = 5 to 7 DRs Maximum Error Rate (MER) = 8 DRs	Maintain SOE of 4 or less discrepancies (DRs) against LCS released applications each year from 2005 to 2010	TBD

Character Limitation Checks		
Table 1 Part 1:		★
Table 1 Part 2:		★
Table 2 Part 1:		★
Table 2 Part 2:		★
Exhibit 300:		★

EA

Enterprise Architecture (EA)

In order to successfully address this area of the business case and capital asset plan you must ensure the investment is included in the agency's EA and Capital Planning and Investment Control (CPIC) process, and is mapped to and supports the FEA. You must also ensure the business case demonstrates the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

1. Is this investment included in your agency's target enterprise architecture?

Yes

1.a. If "no," please explain why?

2. Is this investment included in the agency's EA Transition Strategy?

Yes

2.a. If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment.

KSC Launch Control System

2.b. If "no," please explain why?

Service Reference Model

3. Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <http://www.whitehouse.gov/omb/egov/>.

Component: Use existing SRM Components or identify as "NEW". A "NEW" component is one not already identified as a service component in the FEA SRM.

Reused Name and UPI: A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.

Internal or External Reuse?: 'Internal' reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. 'External' reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.

Funding Percentage: Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the funding level transferred to another agency to pay for the service.

	Agency Component Name	Agency Component Description	Service Domain	Service Type	Component	Reused Component Name	Reused UPI	Internal or External Reuse?	Funding %
1	Space and Ground Network IT Support	LCS provides 7x24 support to handle issues and problems with any LCS sub-system	Customer Services	Customer Relationship Management	Call Center Management			No Reuse	1.00

2	Space and Ground Network IT Support	Products are managed through a combination of the Documentum, Maximo, and Peoplesoft enterprise tools	Customer Services	Customer Relationship Management	Product Management			No Reuse	2.00
3	Space and Ground Network IT Support	Electronic access to LCS requires completion and approval of a computer user registration form and management level approval. Physical access requires appropriate Area Access rights	Customer Services	Customer Relationship Management	Customer / Account Management			No Reuse	1.00
4	Space and Ground Network IT Support	Microsoft Outlook maintains department, user, and function specific distribution lists	Customer Services	Customer Relationship Management	Contact and Profile Management			No Reuse	1.00
5	Space and Ground Network IT Support	USA and NASA LCS management hold regular briefings to discuss current project status	Customer Services	Customer Relationship Management	Partner Relationship Management			No Reuse	2.00
6	Space and Ground Network IT Support	NASA provides a Contractor Evaluation to USA LCS every three months	Customer Services	Customer Relationship Management	Customer Feedback			No Reuse	1.00
7	Space and Ground Network IT Support	LCS utilizes web-based "One-Minute" surveys to gather information	Customer Services	Customer Relationship Management	Surveys			No Reuse	1.00
8	Space and Ground Network IT Support	LCS applications provide user interface preference settings	Customer Services	Customer Preferences	Personalization			No Reuse	1.00
9	Space and Ground Network IT Support	Web sites provide information on how to access and utilize LCS sub-systems	Customer Services	Customer Initiated Assistance	Online Help			No Reuse	3.00
10	Space and Ground Network IT Support	Web sites provide information on how to access and utilize LCS sub-systems	Customer Services	Customer Initiated Assistance	Online Tutorials			No Reuse	2.00
11	Space and Ground Network IT Support	Users can access a 24x7 help desk console by phone or submit electronic requests for service.	Customer Services	Customer Initiated Assistance	Assistance Request			No Reuse	1.00
12	Space and Ground Network IT Support	Users can access a 24x7 help desk console by phone or submit electronic requests for service.	Customer Services	Customer Initiated Assistance	Reservations / Registration			No Reuse	1.00
13	Space and Ground Network IT Support	Processes are tracked using Documentum	Process Automation Services	Tracking and Workflow	Process Tracking			No Reuse	3.00
14	Space and Ground Network IT Support	Issues are documented using Problem Reports or PRACA	Process Automation Services	Tracking and Workflow	Case Management			No Reuse	8.00
15	Space and Ground Network IT Support	Issues are escalated up through the USA and NASA management chain until resolution is reached	Process Automation Services	Tracking and Workflow	Conflict Resolution			No Reuse	1.00
16	Space and Ground Network IT Support	Microsoft Outlook is the standard USA tool for managing electronic communications	Process Automation Services	Routing and Scheduling	Inbound Correspondence Management			No Reuse	1.00

17	Space and Ground Network IT Support	Microsoft Outlook is the standard USA tool for managing electronic communications	Process Automation Services	Routing and Scheduling	Outbound Correspondence Management			No Reuse	1.00
18	Space and Ground Network IT Support	Changes are managed through a Change Control Board (CCB) and controlled electronically through SCMS, Maximo, and Documentum	Business Management Services	Management of Processes	Change Management			No Reuse	5.00
19	Space and Ground Network IT Support	CM is maintained through Documentum, Maximo, and Peoplesoft	Business Management Services	Management of Processes	Configuration Management			No Reuse	5.00
20	Space and Ground Network IT Support	Software requirements are managed through DOORS and RPRS	Business Management Services	Management of Processes	Requirements Management			No Reuse	5.00
21	Space and Ground Network IT Support	LCD utilizes Microsoft Project, Maximo, and Peoplesoft for project management	Business Management Services	Management of Processes	Program / Project Management			No Reuse	1.00
22	Space and Ground Network IT Support	Policies are maintained and managed through Documentum	Business Management Services	Management of Processes	Governance / Policy Management			No Reuse	5.00
23	Space and Ground Network IT Support	Quality processes are controlled through Documentum and Maximo	Business Management Services	Management of Processes	Quality Management			No Reuse	4.00
24	Space and Ground Network IT Support	Business rules are enforced through Documentum, Maximo and Peoplesoft	Business Management Services	Management of Processes	Business Rule Management			No Reuse	1.00
25	Space and Ground Network IT Support	LCS uses the standard USA Risk Management process	Business Management Services	Management of Processes	Risk Management			No Reuse	3.00
26	Space and Ground Network IT Support	LCS utilizes the standard USA suite of Office tools	Business Management Services	Organizational Management	Workgroup / Groupware			No Reuse	3.00
27	Space and Ground Network IT Support	Network management is performed using HP Open View	Business Management Services	Organizational Management	Network Management			No Reuse	4.00
28	Space and Ground Network IT Support	Microsoft Project, Excel, and Word are used for strategic planning efforts	Business Management Services	Investment Management	Strategic Planning and Mgmt			No Reuse	1.00
29	Space and Ground Network IT Support	LCS performance is managed in the COF using the HP Open View tool suite	Business Management Services	Investment Management	Performance Management			No Reuse	5.00

30	Space and Ground Network IT Support	Maximo is used for work authoring capabilities.	Digital Asset Services	Content Management	Content Authoring			No Reuse	8.00
31	Space and Ground Network IT Support	Electronic signatures are used in Maximo to approve work	Digital Asset Services	Content Management	Content Review and Approval			No Reuse	1.00
32	Space and Ground Network IT Support	LCS Documentation uses Dell scanners and software	Digital Asset Services	Document Management	Document Imaging and OCR			No Reuse	3.00
33	Space and Ground Network IT Support	Documents are posted in Documentum and available on the intranet	Digital Asset Services	Document Management	Document Referencing			No Reuse	5.00
34	Space and Ground Network IT Support	LCS Documentation controls revisions to through the Frame maker software	Digital Asset Services	Document Management	Document Revisions			No Reuse	5.00
35	Space and Ground Network IT Support	Documents are managed in Documentum	Digital Asset Services	Document Management	Library / Storage			No Reuse	5.00
36	Space and Ground Network IT Support	Documents are reviewed and approved in Documentum	Digital Asset Services	Document Management	Document Review and Approval			No Reuse	5.00
37	Space and Ground Network IT Support	LCS Documentation handles conversions between different software file types when needed	Digital Asset Services	Document Management	Document Conversion			No Reuse	5.00
38	Space and Ground Network IT Support	LCS supports Indexing by maintaining the infrastructure including servers, document management software, storage and network services	Digital Asset Services	Document Management	Indexing			No Reuse	3.00
39	Space and Ground Network IT Support	LCS supports Classification by maintaining the infrastructure including servers, document management software, storage and network services	Digital Asset Services	Document Management	Classification			No Reuse	3.00
40	Space and Ground Network IT Support	LCS supports Information Retrieval by maintaining the infrastructure including servers, databases, storage and network services	Digital Asset Services	Knowledge Management	Information Retrieval			No Reuse	5.00
41	Space and Ground Network IT Support	Information is shared via the intranet	Digital Asset Services	Knowledge Management	Information Sharing			No Reuse	4.00
42	Space and Ground Network IT Support	Related information can be linked via Documentum or on the intranet	Digital Asset Services	Records Management	Record Linking / Association			No Reuse	4.00
43	Space and Ground Network IT Support	Document provides classification types for LCS documents	Digital Asset Services	Records Management	Document Classification			No Reuse	4.00
44	Space and Ground Network IT Support	LCS information is archived to tape or CD when immediate access is no longer required	Digital Asset Services	Records Management	Document Retirement			No Reuse	4.00
45	Space and Ground Network IT Support	LCS creates math models for use in simulations	Business Analytical Services	Knowledge Discovery	Modeling			No Reuse	8.00

46	Space and Ground Network IT Support	LCS creates math models for use in simulations	Business Analytical Services	Analysis and Statistics	Mathematical			No Reuse	8.00
47	Space and Ground Network IT Support	Microsoft Excel is the standard USA tool for creating graphs. Microsoft Powerpoint is the standard USA tool for creating briefing charts	Business Analytical Services	Visualization	Graphing / Charting			No Reuse	1.00
48	Space and Ground Network IT Support	LCS imagery is stored and viewed on the intranet	Business Analytical Services	Visualization	Imagery			No Reuse	2.00
49	Space and Ground Network IT Support	CAD work is performed using AutoCad	Business Analytical Services	Visualization	CAD			No Reuse	7.00
50	Space and Ground Network IT Support	The standard USA set of office tools is used to support planning efforts	Business Analytical Services	Business Intelligence	Decision Support and Planning			No Reuse	1.00
51	Space and Ground Network IT Support	The standard USA set of office tools is used to support demand forecast	Business Analytical Services	Business Intelligence	Demand Forecasting / Mgmt			No Reuse	1.00
52	Space and Ground Network IT Support	Data in LCS is exchanged via SDC, e-mail or the intranet	Back Office Services	Data Management	Data Exchange			No Reuse	1.00
53	Space and Ground Network IT Support	LCS data is stored and archived via SDC or the USA Ground Ops networks	Back Office Services	Data Management	Data Warehouse			No Reuse	1.00
54	Space and Ground Network IT Support	Loading and Archiving of data is accomplished via contacting the LPS support console in the COF	Back Office Services	Data Management	Loading and Archiving			No Reuse	1.00
55	Space and Ground Network IT Support	Loading and Archiving of data is accomplished via contacting the LPS support console in the COF	Back Office Services	Data Management	Data Recovery			No Reuse	1.00
56	Space and Ground Network IT Support	LCS employees are paid via the normal USA payroll system	Back Office Services	Financial Management	Payroll			No Reuse	1.00
57	Space and Ground Network IT Support	LCS Financial data is audited in the USA business Management office	Back Office Services	Financial Management	Auditing			No Reuse	1.00
58	Space and Ground Network IT Support	LCS Financial data is audited in the USA business Management office	Back Office Services	Financial Management	Billing and Accounting			No Reuse	1.00

Technical Reference Model			
4. To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.			
FEA SRM Component: Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.			
Service Specification: In the Service Specification field, Agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.			
SRM Component	Service Area	Service Category	Service Standard
Inbound Correspondence Management	Service Access and Delivery	Access Channels	Web Browser

SRM Component	Service Area	Service Category	Service Standard
Inbound Correspondence Management	Service Access and Delivery	Access Channels	Wireless / PDA
Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Internet
Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Intranet
Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Extranet
Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Peer to Peer (P2P)
Outbound Correspondence Management	Service Access and Delivery	Delivery Channels	Virtual Private Network (VPN)
Configuration Management	Service Access and Delivery	Service Requirements	Legislative / Compliance
Configuration Management	Service Access and Delivery	Service Requirements	Authentication / Single Sign-on
Configuration Management	Service Access and Delivery	Service Requirements	Hosting
Configuration Management	Service Access and Delivery	Service Transport	Supporting Network Services
Software Development	Service Platform and Infrastructure	Software Engineering	Test Management
Software Development	Service Platform and Infrastructure	Software Engineering	Modeling
Library / Storage	Service Platform and Infrastructure	Database / Storage	Database
Library / Storage	Service Platform and Infrastructure	Database / Storage	Storage
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Embedded Technology Devices
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Peripherals
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Wide Area Network (WAN)
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards
Software Development	Service Platform and Infrastructure	Hardware / Infrastructure	Video Conferencing
Risk Management	Component Framework	Security	Certificates / Digital Signatures
Risk Management	Component Framework	Security	Supporting Security Services
Graphing / Charting	Component Framework	Presentation / Interface	Static Display
Graphing / Charting	Component Framework	Presentation / Interface	Dynamic Server-Side Display
Graphing / Charting	Component Framework	Presentation / Interface	Content Rendering

SRM Component	Service Area	Service Category	Service Standard
Graphing / Charting	Component Framework	Presentation / Interface	Wireless / Mobile / Voice
Configuration Management	Service Interface and Integration	Interoperability	Data Format / Classification
Configuration Management	Service Interface and Integration	Integration	Middleware
Configuration Management	Service Interface and Integration	Integration	Enterprise Application Integration
Record Linking / Association	Service Interface and Integration	Interoperability	Data Format / Classification
Record Linking / Association	Service Interface and Integration	Interoperability	Data Types / Validation
Record Linking / Association	Service Interface and Integration	Interoperability	Data Transformation
Configuration Management	Service Interface and Integration	Interface	Service Discovery
Configuration Management	Service Interface and Integration	Interface	Service Description / Interface

5. Will the application leverage existing components and/or applications across the Government (i.e., FirstGov, Pay.Gov, etc)?

No

5.a. If "yes," please describe.

6. Does this investment provide the public with access to a government automated information system?

No

6.a. If "yes," does customer access require specific software (e.g., a specific web browser version)?

6.a.1. If "yes," provide the specific product name(s) and version number(s) of the required software and the date when the public will be able to access this investment by any software (i.e. to ensure equitable and timely access of government information and services).

RISK

Risk Management

You should perform a risk assessment during the early planning and initial concept phase of the investment's life-cycle, develop a risk-adjusted life-cycle cost estimate and a plan to eliminate, mitigate or manage risk, and be actively managing risk throughout the investment's life-cycle.

Answer the following questions to describe how you are managing investment risks.

1. Does the investment have a Risk Management Plan?

Yes

1.a. If "yes," what is the date of the plan?

May 27, 2005

1.b. Has the Risk Management Plan been significantly changed since last year's submission to OMB?

No

1.c. If "yes," describe any significant changes:

2. If there is currently no plan, will a plan be developed?

2.a. If "yes," what is the planned completion date?

2.b. If "no," what is the strategy for managing the risks?

3. Briefly describe how investment risks are reflected in the life cycle cost estimate and investment schedule: (O&M investments do NOT need to answer.)

COST & SCHEDULE

Cost and Schedule Performance

1. Was operational analysis conducted?

Yes

1.a. If "yes," provide the date the analysis was completed.

Jun 1, 2006

1.b. If "yes," what were the results?

Continuous operational assessments are performed on capital assets to determine their performance and effectiveness in meeting critical mission operations objectives, as opposed to performing an Operational Analysis at discrete milestones within the lifecycle of the Space Shuttle Program and its operations support contracts SFOC/SPOC. A Performance Measurement System is used to track and monitor monthly key metrics to evaluate the effectiveness, efficiency, productivity, availability, reliability, security, etc. of capital assets. Operations and maintenance costs associated with these capital assets are reviewed monthly in conjunction with the metrics to identify any early warning indicators that may impact lifecycle costs and performance goals. These data are used to reprioritize operations and maintenance costs to underperforming assets and/or the requests for new funding in annual Program Operating Plan inputs.

1.c. If "no," please explain why it was not conducted and if there are any plans to conduct operational analysis in the future.

Actual Performance against the Current Baseline

2. Complete the following table to compare actual cost performance against the planned cost performance baseline. Milestones reported may include specific individual scheduled preventative and predictable corrective maintenance activities, or may be the total of planned annual operation and maintenance efforts).

2.a. What costs are included in the reported Cost/Schedule Performance information?

Contractor Only

	Description of Milestone	Planned End Date	Actual End Date	Planned Total Cost (\$mil)	Actual Total Cost (\$mil)	Schedule Variance (# of days)	Cost Variance (\$mil)
1	FY 2006 Operational Support	Sep 30, 2006		58.760			
2	FY 2007 Operational Support	Sep 30, 2007		50.629			
3	FY 2008 Operational Support	Sep 30, 2008		50.754			

			DME	Steady State	Total
Completion date: Current Baseline:	Sep 30, 2011	Total cost: Current Baseline:		388.693	388.693
Estimated completion date:	Sep 30, 2010	Estimate at completion:			